

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	16	"4999869"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:51
L2	3	"5202394"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:52
L3	50	"207003"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:57
L4	11	"1094457"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:58
L5	19	"1081229"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:58
L7	9	"4849307"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 17:12
L8	10	"4499236"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 17:12
L10	21	"3033841"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 17:19
S1	7	"3984494"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 16:47
S2	3	"6710122"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:21
S3	95	"4548990"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:23
S4	56	"4224427"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:25

S5	6	"0524786"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:25
S6	14	"524786"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:26
S7	12	"797987"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/07/29 16:26
S8	11	"5750483"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 12:07
S9	8	"3396038"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 17:19
S10	46	"4849126"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/08/01 17:08

Please note that search-term pricing does apply when
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*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,   *
* effective March 20, 2005. A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*
*****
```

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

```
=> s vinyl acetate/cn
L2          1 VINYL ACETATE/CN
```

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=> d str cn rn
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L2  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2005 ACS on STN
```

AcO-CH=CH₂

****PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT****

```
CN  Acetic acid ethenyl ester (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN  Acetic acid vinyl ester (8CI)
OTHER NAMES:
CN  1-Acetoxyethylene
CN  Acetic acid, ethenyl ester
CN  Acetoxyethene
CN  Acetoxyethylene
CN  Ethenyl acetate
CN  NSC 8404
CN  Ponal
CN  Vinyl A monomer
CN  Vinyl acetate
RN  108-05-4  REGISTRY
```

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=> file caplus
COST IN U.S. DOLLARS          SINCE FILE      TOTAL
                               ENTRY      SESSION
FULL ESTIMATED COST          6.87      11.31
```

FILE 'CAPLUS' ENTERED AT 11:41:13 ON 01 AUG 2005
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FILE COVERS 1907 - 1 Aug 2005 VOL 143 ISS 6
FILE LAST UPDATED: 31 Jul 2005 (20050731/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s 108-05-4/rn
      13087 108-05-4
      3044 108-05-4D
L3      10128 108-05-4/RN
          (108-05-4 (NOTL) 108-05-4D )

=> s vinyl ester? or polyvinyl ester?
      391625 VINYL
      562 VINYLS
      391785 VINYL
          (VINYL OR VINYLS)
      878704 ESTER?
      11686 VINYL ESTER?
          (VINYL(W)ESTER?)
      83609 POLYVINYL
      162 POLYVINYLS
      83725 POLYVINYL
          (POLYVINYL OR POLYVINYLS)
      878704 ESTER?
      657 POLYVINYL ESTER?
          (POLYVINYL(W)ESTER?)
L4      12071 VINYL ESTER? OR POLYVINYL ESTER?

=> s L3 or L4
L5      21093 L3 OR L4

=> s polyether? or polyethylene glycol?
      84579 POLYETHER?
      327732 POLYETHYLENE
      12019 POLYETHYLENES
      331398 POLYETHYLENE
          (POLYETHYLENE OR POLYETHYLENES)
      426036 GLYCOL?
      93873 POLYETHYLENE GLYCOL?
          (POLYETHYLENE(W)GLYCOL?)
L6      172979 POLYETHER? OR POLYETHYLENE GLYCOL?

=> s L4 and L6
L7      429 L4 AND L6

=> s graft copolymer?
      92463 GRAFT
      13375 GRAFTS
      97984 GRAFT
          (GRAFT OR GRAFTS)
      622823 COPOLYMER?
      43560 COPOLYMN
      2237 COPOLYMNS
      44400 COPOLYMN
          (COPOLYMN OR COPOLYMNS)
```

15067 COPOLYMD
 1 COPOLYMDS
 15068 COPOLYMD
 (COPOLYMD OR COPOLYMDS)
 4856 COPOLYMG
 635523 COPOLYMER?
 (COPOLYMER? OR COPOLYMN OR COPOLYMD OR COPOLYMG)
 L8 42584 GRAFT COPOLYMER?
 (GRAFT(W)COPOLYMER?)

=> s L7 and L8

L9 45 L7 AND L8

=> dup rem L9

PROCESSING COMPLETED FOR L9

L10 45 DUP REM L9 (0 DUPLICATES REMOVED)

=> s L9 and (PY<2000 or AY<2000 or PRY<2002)

19751087 PY<2000

2970082 AY<2000

3399004 PRY<2002

L11 39 L9 AND (PY<2000 OR AY<2000 OR PRY<2002)

=> d scan

L11 39 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN
 CC 42 (Coatings, Inks, and Related Products)
 TI **Graft copolymers** bearing at least two unlike types of
 graft components
 ST **graft copolymers** coatings; multiply grafted
 copolymers; polybutadiene **graft copolymers**;
 acrylonitrile **graft copolymers**; methacrylates
graft copolymers; polymethacrylates **graft**
copolymers; styrene **graft copolymers**
 IT Coating materials
 (acrylonitrile **graft copolymers**, solvent-resistant)
 IT 26098-47-5P, preparation
 RL: PREP (Preparation)
 (graft, coatings of, solvent-resistant)
 IT 25323-66-4P, preparation 26812-66-8P, preparation
 RL: PREP (Preparation)
 (graft, manufacture of, for coatings)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L11 39 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN
 IC C08F255-02; C08F263-02
 CC 37-3 (Plastics Manufacture and Processing)
 TI Crosslinked **graft copolymers** by radical-initiated
 precipitating polymerization
 ST graft polymn pptn crosslinking; ethylene graft polymer; acrylonitrile
 graft polymer; acrylate graft polymer; styrene graft polymer;
 divinylbenzene graft polymer; vinyl acetate graft polymer
 IT Crosslinking
 (in polymerization of vinyl compds. on ethylene-vinyl acetate polymers by
 precipitation)
 IT. Polymerization
 (graft, precipitation, of vinyl compds. on ethylene-vinyl acetate polymers
 by,
 crosslinking in)
 IT Polymerization
 (precipitation, of vinyl compds. on ethylene-vinyl acetate polymers,
 crosslinking in)
 IT 80218-20-8 80218-78-6
 RL: USES (Uses)

(graft, manufacture of crosslinked, by precipitation polymerization)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L11 39 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN

IC ICM C08F283-06

INCL 525412000

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 35

TI Elastomeric **polyether**-containing impact polymer products

ST impact strength polyoxyalkylene thermoplastic; tensile strength polyoxyalkylene thermoplastic; graft polymn polyoxyalkylene thermoplastic; styrene polymer polyoxyalkylene toughness; allyloxymethyloxirane methyloxirane styrene copolymer; epoxide unsatd thermoplastic toughness

IT Polyoxyalkylenes, preparation

RL: PREP (Preparation)

(graft polymers and blends containing, impact-resistant, preparation of)

IT Impact strength

Tensile strength

(polyoxyalkylene-containing thermoplastics with high, preparation of)

IT Plastics

RL: PREP (Preparation)

(polyoxyalkylene-thermoplastic blends, preparation of impact-resistant, polymerization method for)

IT Polymerization catalysts

(graft, in preparation of polyoxyalkylene-containing thermoplastics with impact strength)

IT Polymerization

(graft, of ethylenically unsatd. monomers and oxirane derivs., for impact-resistant thermoplastics)

IT 60-35-5D, Acetamide, derivs. 92-84-2, Phenothiazine 97-93-8, Triethylaluminum, uses and miscellaneous 123-54-6, 2,4-Pentanedione, uses and miscellaneous

RL: CAT (Catalyst use); USES (Uses)

(catalysts, for polymerization of oxirane derivs.)

IT 9003-53-6, Polystyrene

RL: PRP (Properties)

(polyoxyalkylene blends, preparation of impact-resistant, polymerization method for)

IT 25549-07-9

RL: USES (Uses)

(polystyrene blends, preparation of impact-resistant, polymerization method for)

IT 106679-85-0P, Allyl glycidyl ether-propylene oxide-styrene **graft**

copolymer 106679-86-1P 106679-87-2P, Glycidyl methallyl

ether-propylene oxide-styrene **graft copolymer**

106679-88-3P, Glycidyl cinnamate-propylene oxide-styrene **graft**

copolymer 106679-89-4P 106679-90-7P, Acrylic

acid-allylglycidyl ether-propylene oxide-styrene **graft**

copolymer 106679-91-8P 106679-92-9P 106679-93-0P

RL: PREP (Preparation)

(preparation of impact-resistant, polymerization method for)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L11 39 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN

IC ICM C08G081-02

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 35, 37

TI Manufacture of heat-resistant hydrophilic polysulfone **graft copolymers**

ST polysulfone graft sepn membrane; vinyl acetate polysulfone membrane; permeability membrane polysulfone graft; chloromethylstyrene polysulfone

sepn membrane
 IT Membranes
 (separation, polysulfone-vinyl compound **graft copolymers**
 for)
 IT Polysulfones, compounds
 RL: USES (Uses)
 (**polyether-**, graft polymers, with (chloromethyl)styrene and
 vinyl acetate, quaternized, for separation membranes)
 IT **Polyethers**, compounds
 RL: USES (Uses)
 (polysulfone-, graft polymers, with (chloromethyl)styrene and vinyl
 acetate, quaternized, for separation membranes)
 IT 83138-12-9, Dylark 250
 RL: USES (Uses)
 (polyester blends, with improved adhesion to polystyrene)
 IT 108-05-4DP, Acetic acid ethenyl ester, polymers with (chloromethyl)styrene
 and hydroxy-terminated polysulfone, quaternized, saponified 25667-42-9DP,
 hydroxy-terminated, polymers with (chloromethyl)styrene and vinyl acetate,
 quaternized, saponified 30030-25-2DP, polymers with hydroxy-terminated
 polysulfone and vinyl acetate, quaternized, saponified
 RL: PREP (Preparation)
 (preparation of, for separation membranes)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> s graft copolymers of vinyl acetate
 92463 GRAFT
 13375 GRAFTS
 97984 GRAFT
 (GRAFT OR GRAFTS)
 182463 COPOLYMERS
 391625 VINYL
 562 VINYLS
 391785 VINYL
 (VINYL OR VINYLS)
 492219 ACETATE
 27546 ACETATES
 503465 ACETATE
 (ACETATE OR ACETATES)
 L12 19 GRAFT COPOLYMERS OF VINYL ACETATE
 (GRAFT (W) COPOLYMERS (1W) VINYL (W) ACETATE)

=> d scan

L12 19 ANSWERS CAPLUS COPYRIGHT 2005 ACS on STN
 IC ICM C09J123-08
 ICS C09J131-04
 CC 38-3 (Plastics Fabrication and Uses)
 TI Ethylene-vinyl acetate copolymer-containing hot-melt adhesive used as
 packaging material
 ST ethylene vinyl acetate copolymer hot melt adhesive packaging material;
 alpha olefin graft rosin ester wax polyisobutene dibutylcresol adhesive
 IT Paraffin waxes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (Sasolwax H 1; ethylene-vinyl acetate copolymer-containing hot-melt
 adhesive for packaging)
 IT Petroleum products
 (aromatic oils, plasticizer; ethylene-vinyl acetate copolymer-containing
 hot-melt adhesive for packaging)
 IT Resin acids
 RL: MOA (Modifier or additive use); USES (Uses)
 (esters, tackifier; ethylene-vinyl acetate copolymer-containing hot-melt
 adhesive for packaging)
 IT Antioxidants
 Packaging materials

130765-09-2P 130765-10-5P

RL: PREP (Preparation)

(tackifier-containing, aqueous emulsions of, manufacture of, for pressure-sensitive adhesives)

IT 99551-25-4, Terpenes and terpenoids

RL: USES (Uses)

(tackifiers, graft copolymers containing, aqueous emulsions of, for pressure-sensitive adhesives)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> d hist

(FILE 'HOME' ENTERED AT 11:39:25 ON 01 AUG 2005)

FILE 'CAPLUS' ENTERED AT 11:39:47 ON 01 AUG 2005

L1 10128 S 108-05-4/RN

FILE 'REGISTRY' ENTERED AT 11:40:39 ON 01 AUG 2005

L2 1 S VINYL ACETATE/CN

FILE 'CAPLUS' ENTERED AT 11:41:13 ON 01 AUG 2005

L3 10128 S 108-05-4/RN

L4 12071 S VINYL ESTER? OR POLYVINYL ESTER?

L5 21093 S L3 OR L4

L6 172979 S POLYETHER? OR POLYETHYLENE GLYCOL?

L7 429 S L4 AND L6

L8 42584 S GRAFT COPOLYMER?

L9 45 S L7 AND L8

L10 45 DUP REM L9 (0 DUPLICATES REMOVED)

L11 39 S L9 AND (PY<2000 OR AY<2000 OR PRY<2002)

L12 19 S GRAFT COPOLYMERS OF VINYL ACETATE

=> s L12 and L6

L13 1 L12 AND L6

=> d 1 ibib abs

L13 ANSWER 1 OF 1 CAPLUS. COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:4275 CAPLUS

DOCUMENT NUMBER: 136:235692

TITLE: Vinyl acetate copolymers in die pressing of alumina

AUTHOR(S): Szafran, M.; Wisniewski, P.; Rokicki, G.; Lukasik, L.

CORPORATE SOURCE: Fac. of Chemistry, Warsaw Univ. of Technology, Warsaw, 00-664, Pol.

SOURCE: Journal of Thermal Analysis and Calorimetry (2001), 66(2), 603-609

CODEN: JTACF7; ISSN: 1418-2874

PUBLISHER: Kluwer Academic Publishers

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The studies on the application of the emulsions of poly(vinyl acetate-co-allyl ether)s containing nonionic hydrophilic poly(oxyethylene) fragments as binders in the die pressing of alumina is presented. It was found that introduction of hydrophilic fragments into mols. of a typical water dispersible polymer led to better polymer affinity to the ceramic powders. It was also shown that low mol. mass of such copolymers should be relatively low ca 1500 g mol⁻¹ to increase the d. and thickening uniformity of the samples before and after sintering. The resultant sinters indicated exceptionally high mech. strength (bending strength ca 500 MPa).

REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s s L4 and L8
MISSING OPERATOR S L4
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s L4 and L8
L14 331 L4 AND L8

=> s L14 and L6
L15 45 L14 AND L6

=> d 1-39 ibib abs

L15 ANSWER 1 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:302056 CAPLUS
DOCUMENT NUMBER: 142:356773
TITLE: Aqueous coating materials with storage stability and
good adhesion to various substrates
INVENTOR(S): Fukuzumi, Tatsushi; Doi, Yasutaka
PATENT ASSIGNEE(S): Mitsubishi Rayon Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005089557	A2	20050407	JP 2003-322812	20030916
PRIORITY APPLN. INFO.:			JP 2003-322812	20030916

AB Title antiblocking materials contain copolymers prepared by emulsion polymerization
of monomers containing **vinyl esters** of branched carboxylic acids, alkyl (meth)acrylates, OH-containing ethylenic unsatd. compds., and COOH-containing ethylenic compds. in the presence of oil-in-water polyorganosiloxane emulsions. Emulsion polymerizing VeoVa 9, VeoVa 10, Bu methacrylate, Bu acrylate, 2-hydroxyethyl methacrylate, methacrylic acid, and styrene in the presence of a siloxane prepared from cyclic dimethylsiloxane oligomers (including trimer, tetramer, pentamer, hexamer, and heptamer) and 3-methacryloxypropylmethyldimethoxysilane gave an emulsion, which was used to form an aqueous coating with mech. stability ; the aqueous coating gave films with antiblocking ability and good adhesion to alkali mortar boards, plasticizer-containing acrylic or PVC plates, and soft steel plates.

L15 ANSWER 2 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:33374 CAPLUS
DOCUMENT NUMBER: 142:115514
TITLE: Halogen-free composite laminated boards with low thermal expansion
INVENTOR(S): Okumura, Hiroya; Takeuchi, Hiroshi; Hirata, Isao; Nozue, Akiyoshi
PATENT ASSIGNEE(S): Japan Composite Co., Ltd., Japan; Matsushita Electric Works, Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2005007783 A2 20050113 JP 2003-175905 20030620
PRIORITY APPLN. INFO.: JP 2003-175905 20030620
OTHER SOURCE(S): MARPAT 142:115514

AB The laminated boards are prepared by curing fiber-reinforced laminates of glass (non)woven fabrics impregnated with thermosetting resin compns. comprising halogen-free radically polymerizable resins (a), thermoplastic resins (b), radically polymerizable monomers (c), fireproofing agents (d), and inorg. fillers (e) in amts. of (a) 10-75, (b) 2-30, (c) 20-60, and (d) 3-50 parts/100 parts (a) + (b) + (c), and that of (e) 20-80 parts/100 parts (a) + (b) + (c) for impregnation into woven fabrics and 120-300 parts/100 parts (a) + (b) + (c) for impregnation into nonwoven fabrics. Metal-clad laminates of the composite laminated boards for elec. are also claimed. Thus, a composition of **vinyl ester** resin (YD 128 methacrylate) 60, unsatd. polyester (prepared from maleic anhydride 391, propylene glycol 141, and styrene 649 g) 20, styrene 5, and an adipic acid-propylene glycol-ethylene glycol copolymer 15% was mixed with 25% PX 200 (phosphate ester), cumene hydroperoxide, and 40% (compound 1) or 170% (compound 2) Al(OH)3 (CL 310). WE 18K-BS (glass fiber woven fabric) impregnated with compound 1, 3 layers of Ep 4060 (glass fiber nonwoven fabric) impregnated with compound 2, and WE 18K-BS impregnated with compound 1 were laminated in this order, sandwiched with Cu foils (TSTO), and hot-pressed to give a Cu-clad laminate showing H2O absorption 0.30%, linear expansion coefficient 18 ppm/°C, UL-94 fire resistance rating V0, and good soldering resistance.

L15 ANSWER 3 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:697736 CAPLUS
DOCUMENT NUMBER: 141:194130
TITLE: **Polyvinyl ester** binders and
 ceramic green sheets
INVENTOR(S): Koharada, Akinobu; Matsuoka, Toshifumi
PATENT ASSIGNEE(S): Nihon Su B. Pobal K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004238217	A2	20040826	JP 2003-26411	20030203
PRIORITY APPLN. INFO.:			JP 2003-26411	20030203

AB **Polyvinyl ester** copolymer binders containing (A) ≥ 1 fatty acid **vinyl esters**, (B) ≥ 1 unsatd. monomers containing 2-pyrrolidone ring, and (C) ≥ 1 unsatd. monomers containing polyoxyalkylenes (preferably, oxyethylene or oxypropylene of d.p. 1-50) at terminals or in side chains are claimed. Ceramic green sheets prepared using the said binders are also claimed. Green sheets having high strength and flexibility are prepared by using metal-free binders.

L15 ANSWER 4 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:291011 CAPLUS
DOCUMENT NUMBER: 140:289087
TITLE: Use of **polyether** blocks containing graft
 polymers for protective finishing for paper.
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Ger. Offen., 8 pp.
 CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PRIORITY APPLN. INFO.:

AB Water-soluble or water-dispersible, film-forming graft polymers, obtainable

L15 ANSWER 5 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:117855 CAPLUS

DOCUMENT NUMBER: 140:147066

TITLE: Manufacture of vinyl ester

INVENTOR(S): Tomita, Munetoshi

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

JP 2004043527 A2 20040212 JP 2002-199350 20020709

PRIORITY APPLN. INFO.: JP 2002-199350 20020709

AB Oxyalkylene group-containing monomers and vinyl ester

monomers are copolymerized by using reactors having jackets heated to satisfy

the difference of T_s^0 (temperature at starting of polymerization) and T_e^0

(temperature just before polymerization termination) 5-50° to give the title

polymers. Thus, 11.6 parts polyoxvethylene monoallyl ether and 100 parts

vinyl acetate were refluxed in Me_2CHOH , polymerized with AIBN at 71° (=

Ts), heated to 84.5° ($= T_e$) at heating rate $1.5^{\circ}/\text{h}$ for 9 h

to 96% conversion, freed of monomers, substituted by MeOH, diluted, saponified

with NaOH, neutralized with AcOH, freed of solvent, and stirred with H₂O

to give an aqueous polymer solution showing no precipitation at 30° for 6 mo

Suspension polymerization of vinyl chloride was carried out by using the

suspension polymerization of vinyl chloride was carried out by using the polymer

solution as auxiliary dispersing agent to give bulky PVC with good

plasticizer absorbability and reduced free monomer and film fishbones

L15 ANSWER 6 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:582467 CAPLUS

DOCUMENT NUMBER: 139:117827

TITLE: Manufacture of oxyalkylene group-containing

INVENTOR(S): Tomita, Munetoshi

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

JP 2003212905 A2 20030730 JP 2002-16309 20020125

PRIORITY APPLN. INFO.: JP 2002-16309 20020125

AB (A) oxyalkylene group-containing monomers and (B) **vinyl ester** monomers are copolymerized by starting reaction using all of A and 50-99% of B and then by adding the residual A (and saponified) to give copolymer resins useful for discoloration-free films, etc. Otherwise, the copolymer resins are used as dispersants in dispersion polymerization of vinyl chloride, etc., showing no foaming. Thus, **polyethylene glycol** monoallyl ether-vinyl acetate **graft copolymer** was manufactured as above and saponified. Vinyl chloride was subjected to dispersion polymerization using the saponified copolymer, showing no foaming during the polymerization and during unreacted monomer recovery after that.

L15 ANSWER 7 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:964408 CAPLUS

DOCUMENT NUMBER: 138:39742

TITLE: Use of water-soluble or water-dispersible, **polyether** block-containing graft polymers as coating agents, matrix formers and packaging materials for agrochemicals

INVENTOR(S): Gotsche, Michael; Gomez, Marcos; Schneider, Tanja; Meffert, Helmut; Schneider, Karl-Heinrich

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 49 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100913	A1	20021219	WO 2002-EP6045	20020531
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10128531	A1	20021219	DE 2001-10128531	20010613
CA 2450386	AA	20021219	CA 2002-2450386	20020531
EP 1399492	A1	20040324	EP 2002-738140	20020531
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
BR 2002010992	A	20040608	BR 2002-10992	20020531
CN 1516711	A	20040728	CN 2002-811938	20020531
JP 2004534880	T2	20041118	JP 2003-503679	20020531
US 2004248741	A1	20041209	US 2004-480541	20040701
PRIORITY APPLN. INFO.:			DE 2001-10128531	A 20010613
			WO 2002-EP6045	W 20020531

AB The invention relates to water-soluble or water-dispersible, film-forming graft polymers which are obtained by radical polymerization of (a) the **vinyl esters** of aliphatic C1-C24 carboxylic acids in the presence of (b) the R1[(R2O)u(R3O)v(R4O)w[A(R5O)x(R6O)y(R7O)z]sR8]n with number average mol. weight of at least 300 wherein the variables independently have

the following meanings: R1 represents hydroxy, amino, C1-C24 alkoxy, R9COO, R9NHCOO, a polyalc. group; R2 to R7 represent (CH2)2, (CH2)3, (CH2)4, CH2CHMe, CH2CH(CH2Me), CH2CHOR10CH2; R8 represents hydrogen, amino-C1-C6-alkyl, C1-C24 alkyl, R9CO, R9NHCO; R9 represents C1-C24 alkyl; R10 represents hydrogen, C1-C24 alkyl, R9CO; A represents COO, COBCOO,

CONHBNHCOO; B represents (CH₂)_t or (substituted) arylene; n is 1 or, if R₁ is a polyalc. group, n is 1 to 8; s is 0 to 500; t is 1 to 12; u is 1 to 5000; v is 0 to 5000; w is 0 to 5000; x is 1 to 5000; y is 0 to 5000; and z is 0 to 5000. The inventive polymers can be used as coating agents, matrix formers and packaging materials for agrochems. A typical graft polymer was manufactured by radical polymerization of 410 g vinyl acetate in

the

presence of PEG (average mol. weight 6000).

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 8 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:293802 CAPLUS

DOCUMENT NUMBER: 136:327426

TITLE: Use of water-soluble or water-dispersible **polyether** blocks containing graft polymers as coating material and packaging for washing, cleaning and for the treatment of laundry

INVENTOR(S): Bertleff, Werner; Gotsche, Michael; Kolter, Karl; Leinenbach, Alfred

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002031096	A1	20020418	WO 2001-EP11761	20011011
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 10050958	A1	20020418	DE 2000-10050958	20001013
AU 2001095613	A5	20020422	AU 2001-95613	20011011
CA 2423518	AA	20030325	CA 2001-2423518	20011011
EP 1326953	A1	20030716	EP 2001-976301	20011011
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004511624	T2	20040415	JP 2002-534467	20011011
US 2004033929	A1	20040219	US 2003-399141	20030414
PRIORITY APPLN. INFO.:			DE 2000-10050958	A 20001013
			WO 2001-EP11761	W 20011011

AB The invention relates to the use of water-soluble or water-dispersible, film-forming graft polymers, which are obtainable by radical polymerization of (a) **vinyl esters** of aliphatic C₁-C₂₄ carboxylic acids in the presence of, (b) **polyethers** with an average mol. weight (average number) of at least 300, as coating material for particle shaped washing and cleaning agents, and as packaging for washing, cleaning and laundry treating agents for producing individual portions for dosing said agents in the cleaning process together with the packaging.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 9 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:172032 CAPLUS

DOCUMENT NUMBER: 136:233927

TITLE: Use of grafted polymers based on polyalkylene oxides

as graying inhibitors in washing and post-treatment of synthetic textiles

INVENTOR(S): Huff, Juergen; Mohr, Bernhard; Kistenmacher, Axel; Koltzenburg, Sebastian; Mueller, Christine

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002018526	A1	20020307	WO 2001-EP10000	20010830
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10042815	A1	20020314	DE 2000-10042815	20000830
AU 2001084043	A5	20020313	AU 2001-84043	20010830
CA 2420938	AA	20030227	CA 2001-2420938	20010830
EP 1315789	A1	20030604	EP 2001-962983	20010830
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004507610	T2	20040311	JP 2002-524029	20010830
US 2003186833	A1	20031002	US 2003-362360	20030227
PRIORITY APPLN. INFO.: DE 2000-10042815 A 20000830 WO 2001-EP10000 W 20010830				
AB Polymers prepared by grafting polyalkylene oxide containing ≥ 1 3 units of a C2-4 alkylene oxide with ≥ 1 vinyl ester of carboxylic acid, ≥ 1 N-vinyl lactam and optionally ≥ 1 monoethylenically unsatd. monomer and monomer having ≥ 2 ethylenically unsatd., are used as graying inhibitors in laundry detergents and for textiles containing synthetic fibers. A graying inhibitor prepared by grafting 40 g polyethylene glycol with 45 g vinyl acetate and 15 g N-vinylcaprolactam was used in a laundry detergent containing C12/C14 alkylbenzenesulfonate 5.0, ethoxylated (7 mol) tallow alc. 5.0, soap 1.4, zeolite A 30, polycarboxylate 5.8, Na disilicate 3.6, Na2CO3 14, Na2SO4 6, Na perborate tetrahydrate 21, CM-cellulose-Na salt 1.2 and TAED 6%.				
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L15 ANSWER 10 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:157538 CAPLUS

DOCUMENT NUMBER: 136:221521

TITLE: Skin cosmetic formulations

INVENTOR(S): Gotsche, Michael; Wood, Claudia; Dieing, Reinhold; Jentzsch, Axel

PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 64 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
 JP 2004506669 T2 20040304 JP 2002-520766 20010817
 AT 290361 E 20050315 AT 2001-965197 20010817
 US 2003199642 A1 20031023 US 2003-362053 20030220
 US 6864330 B2 20050308

PRIORITY APPLN. INFO.: DE 2000-10041211 A 20000822
 WO 2001-EP9491 W 20010817

AB The invention relates to the use of **graft copolymers** obtained by radical **graft copolymerization** of (a) ≥ 1 of N-vinyl amine and (or) CH₂:CR₃NR₂COR₁ (R₁, R₂, R₃ = H or C1-6 alkyl) and (b), optionally, one or several other copolymerizable monomers on a polymer graft base (c) for cosmetic applications, with the proviso that if the polymer graft base is a compound containing **polyether**, the copolymerizable polymer (b) does not represent **vinyl ester**. These polymers exhibit good strengthening and conditioning properties in the cosmetics. A typical polymer was manufactured by adding vinylformamide 297.1 in 1.5 h simultaneously with 10 g tert-Bu peroctoate in 32 g triethylene glycol mono-Me ether in 2 h to a solution containing Pluriol E 4000 (PEG) 72.8, water 180, 75% H₃PO₄ 2.8, and 50% NaOH 2.8 g at reflux, and heating an addnl. 1.5 h.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 12 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:157526 CAPLUS
 DOCUMENT NUMBER: 136:221510
 TITLE: Hair cosmetic formulations based on **polyvinyl ester-grafted polyethers**
 INVENTOR(S): Gotsche, Michael; Wood, Claudia
 PATENT ASSIGNEE(S): Basf Aktiengesellschaft, Germany
 SOURCE: PCT Int. Appl., 52 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002015853	A1	20020228	WO 2001-EP9437	20010816
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10041163	A1	20020307	DE 2000-10041163	20000821
CA 2419976	AA	20020228	CA 2001-2419976	20010816
AU 2001084020	A5	20020304	AU 2001-84020	20010816
EP 1313431	A1	20030528	EP 2001-962950	20010816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004506668	T2	20040304	JP 2002-520765	20010816
US 2003180245	A1	20030925	US 2003-344538	20030212
PRIORITY APPLN. INFO.: DE 2000-10041163 A 20000821 WO 2001-EP9437 W 20010816				

AB The invention relates to the use of polymers, which may be obtained by the radical polymerization of (a) at least one **vinyl ester** of C1-C24 carboxylic acids in the presence of (b) **polyether** containing compds. and (c) one or several further copolymerizable monomers, in hair cosmetic formulations. The resulting products provide hair dressings with

good strength and elasticity. A typical polymer was manufactured by adding 410 g vinyl acetate and 1.4 g tert-Bu perpivalate in 30 g MeOH in 3 h to 72 g PEG (mol. weight 1500) at 80° with stirring and stirring an addnl. 2 h at 80°.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 13 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:793532 CAPLUS

DOCUMENT NUMBER: 135:345197

TITLE: Thermally meltable poly(vinyl alcohol) resin compositions with good melt processability

INVENTOR(S): Tsujimoto, Takuya; Fujiwara, Naoki

PATENT ASSIGNEE(S): Kuraray Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001302868	A2	20011031	JP 2000-118396	20000419
PRIORITY APPLN. INFO.:			JP 2000-118396	20000419

AB The compns. giving molded articles with freedom from fish-eyes and gels, comprise (A) 100 parts poly(vinyl alc.) resins having a viscosity-average d.p. of 200-500, and (B) 3-20 parts polyhydric (≥ 3 OH groups) alc.-alkylene oxide 1:1-4 mol/mol adducts as plasticizers, where the poly(vinyl alc.) resins are derived from the saponification products of vinyl acetate polymers or copolymers. Thus, preparing a saponification product of

EVA having ethylene content 8 mol%, viscosity-average d.p. 480 and saponification degree 98%, mixing 100 parts this product with 5 part a sorbitol-ethylene oxide (1:1) adduct, extruder kneading, pelletizing, melt spinning at 220° while taking up at 800 m/min and drawing on a hot roller and a hot plate gave a fiber with round profile without breaking.

L15 ANSWER 14 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:709708 CAPLUS

DOCUMENT NUMBER: 135:258696

TITLE: Use of **graft copolymers** in laser-markable relief-printing sheets

INVENTOR(S): Hiller, Margit; Leinenbach, Alfred; Stebani, Uwe; Wenzl, Wolfgang

PATENT ASSIGNEE(S): BASF Drucksysteme G.m.b.H., Germany

SOURCE: Eur. Pat. Appl., 10 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1136254	A2	20010926	EP 2001-106885	20010320
EP 1136254	A3	20020911		
EP 1136254	B1	20030528		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2001328365	A2	20011127	JP 2001-82795	20010322
US 2001044076	A1	20011122	US 2001-814738	20010323
US 6627385	B2	20030930		
PRIORITY APPLN. INFO.:			DE 2000-10014049	A 20000323

AB The title sheets, with high sensitivity towards laser light and leaving no melt edges in laser marking, are manufactured from graft polymers prepared by radical polymerization of **vinyl esters** in the presence of polyoxyalkylenes and at least partial saponification of the resulting polymers. A

mixture of Alcotex 975 [a graft polymer (mol. weight 70,000) prepared from **polyethylene glycol** (I) (mol. weight 35,000) and containing 42 mol% vinyl alc.-ester groups (saponification 97%)] 36, PVAL 486 [a similar polymer (mol. weight 62,000) prepared from I (mol. weight 25,000), vinyl alc.-ester group

content 75 mol%, saponification 86%] 9, Laromer LR 8830 (Ph glycidyl ether acrylate) 43.25, glycerol 10, stabilizer 0.5, photoinitiator 1.2, and dye 0.05% was cast to a 950- μ m film which was cured by actinic light. Engraving this sheet with a CO₂ laser resulted in a relief depth of 800 μ m and a resolution of 60 lines/cm.

L15 ANSWER 15 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:594296 CAPLUS

DOCUMENT NUMBER: 135:167500

TITLE: Method for the production of water-soluble or water-dispersible **polyether**-containing polymers for coatings, binders, and/or film-forming auxiliary materials in drug delivery, packaging materials, or cosmetic and other formulations.

INVENTOR(S): Angel, Maximilian; Gotsche, Michael; Kolter, Karl

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 12 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10005942	A1	20010816	DE 2000-10005942	20000209
EP 1125954	A2	20010822	EP 2001-101421	20010123
EP 1125954	A3	20011024		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2001018489	A1	20010830	US 2001-767821	20010124
JP 2001261754	A2	20010926	JP 2001-32583	20010208
CN 1308091	A	20010815	CN 2001-103424	20010209
PRIORITY APPLN. INFO.:			DE 2000-10005942	A 20000209

AB **Graft copolymers** of poly(**vinyl esters**) are prepared by polymerization of ≥ 1 **vinyl ester** of a C1-24 carboxylic acid in the presence of a polyalkylene glycol solid at room temperature and, optionally, ≥ 1 further monomer using a radical organic initiator system with the characteristic feature being the use of a liquid polyalkylene glycol as solvent for the radical initiator system. Thus, Pluriol E6000 (a solid **polyethylene glycol**) was heated to melt at 90°, then vinyl acetate, tert-Bu peroctoate, and Pluriol E600 (a liquid **polyethylene glycol**) added and the reaction mixture allowed to polymerize. The mixture was then cooled, followed by sequential addition of MeOH, NaOH, and, finally, citric acid (after heating again). When the product is fully dissolved, MeOH and MeOAc were distilled off. The product gave good results when was used as a coating for propranolol tablets, a binder for glibenclamid tablets, an additive for ultrasound gels, or as a film-former in a disinfection spray.

L15 ANSWER 16 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2001:444587 CAPLUS

DOCUMENT NUMBER: 135:47698
 TITLE: Water-based fluoropolymer composite dispersions for water-, weather-, and soil-resistant coatings
 INVENTOR(S): Yamamoto, Yuji; Unoki, Masao; Ishida, Toru
 PATENT ASSIGNEE(S): Asahi Glass Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001164065	A2	20010619	JP 1999-352564	19991213
PRIORITY APPLN. INFO.:			JP 1999-352564	19991213

AB The dispersions for coating glasses, metals, cement, etc., are obtained by copolymerizing 5-100 parts of mixtures containing (1) C2-8 linear, branched, and/or cyclic alkyl (meth)acrylate esters, (2) (meth)acrylate esters having **polyether** chains, and (3) radically polymerizable comonomers in the presence of 100 parts of copolymer particles containing units of (i) fluoroolefins, (ii) propylene, ethylene, and/or butylene, and optionally (iii) **vinyl esters**, vinyl ethers, isopropenyl ethers, and/or allyl ethers. Thus, tert-Bu methacrylate and NK Ester M 90G (**polyether** methacrylate) were polymerized in an aqueous dispersion of tetrafluoroethylene-propylene-ethylene copolymer to give an aqueous dispersion, which was mixed with additives and sprayed on an Al plate to give a coating showing uniform film formation and high resistance to weather, water, and soiling.

L15 ANSWER 17 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:748868 CAPLUS
 DOCUMENT NUMBER: 133:297471
 TITLE: Polyoxyalkylene-modified vinyl alcohol polymer films easily soluble in cold water for packaging of detergents, pesticides, and fertilizers
 INVENTOR(S): Yugawa, Keiji; Noguchi, Hiroshi
 PATENT ASSIGNEE(S): Unitika Chemical Co., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000297159	A2	20001024	JP 1999-143782	19990415
PRIORITY APPLN. INFO.:			JP 1999-143782	19990415

AB The films mainly contain water-soluble or dispersible modified vinyl alcohol polymers with saponification degree ≥ 30 mol% manufactured by saponification of polymers of aliphatic **vinyl esters** and ≥ 0.1 mol% polyoxyalkylene vinyl ethers. Saponified 6:94 mol% **polyethylene glycol** vinyl ether-vinyl acetate **graft copolymer** (saponification degree 88.3 mol%, d.p. 1100) was dissolved in H₂O and cast on a polyester plate to give a transparent 30- μ m film. Powdered detergent was heat-sealed in a bag made of the film, left for 1 yr, and soaked in water at 5°. The bag dissolved within 25 s.

L15 ANSWER 18 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:715630 CAPLUS
 DOCUMENT NUMBER: 133:283121
 TITLE: Antistatic photocurable resin compositions having excellent moisture resistance and moldings coated with

INVENTOR(S): them
 PATENT ASSIGNEE(S): Fujita, Masato
 SOURCE: Sumitomo Chemical Co., Ltd., Japan
 Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000281736	A2	20001010	JP 1999-201632	19990715
PRIORITY APPLN. INFO.:			JP 1999-16962	A 19990126

AB Title compns. comprise photocurable oligomers and/or monomers, photopolymer. initiators, and saponified ethylene-saturated carboxylic acid **vinyl esters** copolymer-alkylene oxide adducts and/or styrene-unsatd. acid anhydride copolymer-alkylene oxide monoalkyl ether adducts. Thus, a composition containing bisphenol A diglycidyl ether diacrylate
 (Ripoxy SP 1509) 10, **polyethylene glycol** diacrylate
 (NK Ester A 400) 10, hydroxy pivalic acid neopentyl glycol diacrylate
 (Kayarad MANDA) 70, 1-hydroxycyclohexyl Ph ketone (Irgacure 184) 9, 2,2-dimethoxy-1,2-diphenylethan-1-one (Irgacure 651) 3, ethoxylated 90%-saponified EVA 5 parts was applied on a polycarbonate CD substrate and cured by UV to give coatings showing pensile hardness H, surface resistivity $2 + 10^{12}$ and $9 + 10^{11} \Omega$, initially and after 100 h at 80° and 85% RH, resp.

L15 ANSWER 19 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2000:593011 CAPLUS
 DOCUMENT NUMBER: 133:178486
 TITLE: Cosmetic hair formulations
 INVENTOR(S): Dieing, Reinhold; Gotsche, Michael; Hoessel, Peter; Sanner, Axel; Leinenbach, Alfred
 PATENT ASSIGNEE(S): BASF A.-G., Germany
 SOURCE: Ger. Offen., 20 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19907587	A1	20000824	DE 1999-19907587	19990222
CA 2363079	AA	20000831	CA 2000-2363079	20000210
WO 2000049998	A1	20000831	WO 2000-EP1070	20000210
W: CA, JP, MX, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1154751	A1	20011121	EP 2000-906310	20000210
EP 1154751	B1	20020828		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
AT 222746	E	20020915	AT 2000-906310	20000210
JP 2002537315	T2	20021105	JP 2000-600610	20000210
PT 1154751	T	20030131	PT 2000-906310	20000210
ES 2182784	T3	20030316	ES 2000-906310	20000210
PRIORITY APPLN. INFO.:			DE 1999-19907587	A 19990222
			WO 2000-EP1070	W 20000210

AB The title prepns., which bond hairdos firmly while retaining good elasticity, contain saponified copolymers of C1-24 **vinyl esters, polyether** monomers, and, optionally, comonomers.
 A polymer prepared by peroxide-initiated grafting of 410 g vinyl acetate on

72 g **polyethylene glycol** (mol. weight 6000) was saponified (>95%) with NaOH in MeOH to give a product with K-value 54. An aerosol foam of a mixture of this polymer 2.00, cocotrimethylammonium methosulfate 2.00, H₂O 67.7%, and propane-butane 10.0 parts had good consistency, hand, combability, and elasticity.

L15 ANSWER 20 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:227479 CAPLUS

DOCUMENT NUMBER: 132:256020

TITLE: Application of water-soluble or water-dispersible **polyether**-containing polymers as coating agents, binders and/or film-forming excipients in pharmaceutical dosage forms

INVENTOR(S): Gotsche, Michael; Kolter, Karl; Sanner, Axel; Angel, Maximilian; Leinenbach, Alfred

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000018375	A1	20000406	WO 1999-EP7123	19990924
W: CN, JP, RO, SI, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19844903	A1	20000406	DE 1998-19844903	19980930
DE 19905906	A1	20000817	DE 1999-19905906	19990211
DE 19931667	A1	20010111	DE 1999-19931667	19990708
EP 1124541	A1	20010822	EP 1999-948859	19990924
EP 1124541	B1	20031126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO				
JP 2002525312	T2	20020813	JP 2000-571895	19990924
AT 254908	E	20031215	AT 1999-948859	19990924
PT 1124541	T	20040430	PT 1999-948859	19990924
ES 2212633	T3	20040716	ES 1999-948859	19990924
US 6579953	B1	20030617	US 2001-787956	20010323

PRIORITY APPLN. INFO.:

DE 1998-19844903	A	19980930
DE 1999-19905906	A	19990211
DE 1999-19931667	A	19990708
WO 1999-EP7123	W	19990924

AB Polymers which can be obtained by graft polymerization of ≥ 1 **vinyl ester** of aliphatic C1-24 carboxylic acids to **polyethers**
 $R1[O(R2O)u(R3O)v(R4O)w[A(R5O)x(R6O)y(R7O)z]SR8]n$ [R1 = H, C1-24 alkyl, R9C(O), R9NHC(O), polyol; R2-R7 = (CH₂)₂₋₄, CH₂CHMe, CH₂CHEt, CH₂CH(OR₁₀)CH₂; R8 = H, C1-24 alkyl, R9C(O), R9NHC(O); R9 = C1-24 alkyl; R₁₀ = H, C1-24 alkyl, R9C(O); A = CO₂, C(O)BCO₂, C(O)NHB_{NH}CO₂; B = (substituted) (CH₂)_t or arylene; n = 1-8; S = 0-500; t = 1-12; u, x = 1-5000; v, w, y, z = 0-5000] are used as coating, binding, and/or film-forming agents in pharmaceutical forms of administration. These polymers possess high flexibility and adhesiveness and their solns. show low viscosity even without the use of plasticizers; they can be applied by spraying, and are useful as ingredients of transdermal plasters. They also increase the solubility and bioavailability of poorly water-soluble drugs

and

can function as wetting agents, emulsifiers, crystallization inhibitors, anticaking agents, protective colloids, spreading agents, viscosity modulators, and drug release rate regulators. Thus, vinyl acetate 410 and tert-Bu perpivalate (in 30 g MeOH) 1.4 g were added in sep. streams over 3 h to 72 g PEG-6000 at 80°. After 2 addition h at 80°, the polymer was cooled, dissolved in 450 mL MeOH, saponified with 50 mL 10%

methanolic NaOH, and neutralized after 40 min with 750 mL 1% AcOH, MeOH was removed by steam distillation, and the polymer was freeze dried. The polymer had a K value of 54 and a tearing elongation of 74%; a 20% aqueous solution of the polymer had viscosity 124 mPa s. Tablet cores containing propranolol-HCl 40, Kollidon VA 64 12.50, and Mg stearate 2.50 mg were spray-coated with a dispersion of this polymer 10.0, Sicovit Red 1.5, TiO₂ 3.0, and talc 4.5 in H₂O 81.0 weight%. The coated tablets disintegrated in artificial gastric juice within 5 min 26 s and had a breaking strength of 92 N.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 21 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:44944 CAPLUS

DOCUMENT NUMBER: 133:43778

TITLE: The synthesis of surface grafted polystyrene resins with **polyethylene glycols** using ozone oxidation and their applications in enzyme immobilization

AUTHOR(S): Lee, Yoon-Sik; Wang, Young; Byun, Jang-Woong

CORPORATE SOURCE: Department of Chemical Technology, Seoul National University, Seoul, 151-742, S. Korea

SOURCE: Innovation and Perspectives in Solid Phase Synthesis & Combinatorial Libraries: Peptides, Proteins and Nucleic Acids--Small Molecule Organic Chemical Diversity, Collected Papers, International Symposium, 5th, London, Sept. 2-6, 1997 (1999), Meeting Date 1997, 333-334. Editor(s): Epton, Roger. Mayflower Scientific Ltd.: Kingswinford, UK.
CODEN: 68OEAA

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A method for the synthesis of surface-grafted polystyrene (PS) resins with poly(ethylene glycol)s (PEGs) was developed and tested as enzyme immobilization supports in the synthesis of peptides in organic phase. PS resins were treated with O₃ to introduce hydroperoxide groups on the PS surface and various PEG monomers (mono allyl ether, mono **vinyl ester**) were grafted on the surface by thermal or redox polymerization. The performance of the PS-g-PEG resins were tested as a support material for enzyme immobilization (e.g. α -chymotrypsin). Activities of immobilized enzymes were evaluated by dipeptide syntheses.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 22 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:498270 CAPLUS

DOCUMENT NUMBER: 131:158103

TITLE: **Vinyl ester** polymer-based dispersing aids for suspension polymerization of vinyl compounds

INVENTOR(S): Shibuya, Mitsuo; Kitamura, Kiyoharu

PATENT ASSIGNEE(S): Nippon Synthetic Chemical Industry Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11217413	A2	19990810	JP 1998-39765	19980204
PRIORITY APPLN. INFO.:			JP 1998-39765	19980204

AB The dispersing aids comprise **vinyl ester** polymers having x mol% carbonyl groups and showing saponification degree of **vinyl**

esters 20-65 mol%, average d.p. (PA) 150-1000, and $0.4 < PA + x + 10^{-2} < 3$. Thus, 7.0 parts vinyl acetate and 1.25 parts polyoxyethylene monoallyl ether (Uniox PKA S004) were polymerized in the presence of MeCHO and acetyl peroxide and saponified 45 mol% with NaOH to give a polymer showing $PA = 250$ and $PA + x + 10^{-2} = 1.2$. Then, 100 parts vinyl chloride was mixed with H₂O 150, 10% solution of the polymer 0.2, poly(vinyl alc.) (72 mol%-saponified) 0.07, and di(2-ethylhexyl) peroxy carbonate and polymerized at 57° to give PVC powders showing average particle size 128 nm, no scale deposition on the reactor, and few fisheye formation when molded.

L15 ANSWER 23 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:98477 CAPLUS
DOCUMENT NUMBER: 128:154933
TITLE: Antistatic polymer compositions with excellent impact resistance
INVENTOR(S): Hashimoto, Yoshihiko; Ichioka, Teruhiro
PATENT ASSIGNEE(S): Kanegafuchi Chemical Industry Co., Ltd., Japan; Techno Polymer Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10036628	A2	19980210	JP 1996-209076	19960719
JP 3618478	B2	20050209		

PRIORITY APPLN. INFO.: JP 1996-209076 19960719

AB The comps., useful for elec. and electronic parts, etc., comprise (A) mixts. of 0-90% copolymers of aromatic vinyl compds. 50-90, vinyl cyanides 10-40, alkyl (meth)acrylates 0-40, N-substituted maleimides 0-40, and other vinyl comonomers 0-20% and 10-100% **graft copolymers** of 10-95% rubbers ($T_g \leq 0^\circ$) grafted with 5-90% monomer mixts. of α % aromatic vinyl compds., β % vinyl cyanides, γ % alkyl (meth)acrylates, and δ % other vinyl comonomers, satisfying $(\beta + \gamma)/4 = 10-40$, $\delta = 100 - \beta - \gamma - \alpha$, $\beta \geq 0$, $\gamma \geq 0$, $\alpha = 0-90$, and $\delta = 0-20$, (B) 1-10 parts (vs. 100 parts A) poly(ether-ester-amides) derived from carboxy-terminated polyamides (M_n 500-5000) and bisphenol-ethylene oxide adducts (M_n 300-3000) and/or poly(ethylene oxide) (M_n 300-6000), (C) 0.1-10 parts (same as above) adducts of alkylene oxides and saponified ethylene-saturated carboxylic acid **vinyl ester** copolymers, (D) 0.1-5 parts (same as above) alkanesulfonate salts and/or alkylbenzenesulfonate salts, and (E) 0.1-5 parts (same as above) phosphorous acid derivs., metaphosphoric acid derivs., and/or pyrophosphates. Thus, monomers of α -methylstyrene 73, styrene 2, and acrylonitrile 25% were polymerized in an aqueous media in the presence of tert-dodecyl mercaptan and cumene hydroperoxide to give a copolymer (I), sep., 70 parts (solid) polybutadiene rubber ($T_g -90^\circ$) was grafted with 20 parts styrene and 10 parts acrylonitrile to give a **graft copolymer** latex, 30 parts of which was blended with 70 parts I and 0.6 part antioxidants, coagulated, washed, and dried to give a mixture A composition of the mixture 100, a poly(ether-amide) [prepared from ω -caprolactam 30.3, adipic acid 4.9, and bisphenol A-ethylene oxide adduct (M_n 2000) 64.8 parts] 4.5, ethoxylated saponified ethylene-vinyl acetate copolymer 1.5, Na dodecanesulfonate 1.5, K4P207 1.0, ethylenebisstearamide 1, and antioxidants 0.6 part was extruded to give a test piece showing heat distortion temperature 105° under 18.6-kg load, Izod impact strength 10 kg-cm/cm, and static charge half life 0.5 s initially and no change after washed.

L15 ANSWER 24 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1996:184048 CAPLUS
DOCUMENT NUMBER: 124:203970
TITLE: Low-viscosity blends of amphiphilic nonionic
graft copolymers and
viscosity-reducing additives as graying inhibitors for
detergents
INVENTOR(S): Boeckh, Dieter; Seelmann-Eggebert, Hans-Peter; Jaeger,
Hans-Ulrich; Kahl, Rolf-Dieter; Schornick, Gunnar
PATENT ASSIGNEE(S): BASF A.-G., Germany
SOURCE: Eur. Pat. Appl., 9 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 692520	A1	19960117	EP 1995-110442	19950705
EP 692520	B1	19971029		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
DE 4424818	A1	19960118	DE 1994-4424818	19940714
AT 159748	E	19971115	AT 1995-110442	19950705
ES 2108519	T3	19971216	ES 1995-110442	19950705
CA 2153609	AA	19960115	CA 1995-2153609	19950711
AU 9524967	A1	19960125	AU 1995-24967	19950712
AU 689896	B2	19980409		
US 5635554	A	19970603	US 1995-501340	19950712
JP 08053599	A2	19960227	JP 1995-179101	19950714
CN 1124259	A	19960612	CN 1995-115025	19950714
CN 1100826	B	20030205		

PRIORITY APPLN. INFO.: DE 1994-4424818 A 19940714

AB The title blends comprise (A) 40-97.5% amphiphilic nonionic **graft copolymers** (mol. weight ≤ 2500) containing $\geq 20\%$ polyoxyalkylene or polyvinylpyrrolidone units as hydrophilic parts and $\geq 40\%$ **vinyl ester** and/or (meth)acrylate ester units as hydrophobic parts of the mols., (B) 2.5-60% ≥ 1 viscosity-reducing additive selected from alcs., alkoxylated alkylphenols or amines, and OH-compds. with 1-4 OH groups and 2-10 C atoms, and (C) 0-40% homogenizing or phase-stabilizing additives, e.g., H₂O, C₈-20 mono- or dicarboxylic acids, fatty alc. sulfates, etc. A typical title blend having viscosity 2800 mPa·s (50°) contained 60 % **polyethylene glycol** (mol. weight 6000) melt-grafted with vinyl acetate (K value 21.8, viscosity 203,000 mPa·s), 36% diethylene glycol, and 4% H₂O.

L15 ANSWER 25 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1995:503337 CAPLUS
DOCUMENT NUMBER: 123:34870
TITLE: Laminates including polyoxyalkylene-poly(vinyl
alcohol) fabrics
INVENTOR(S): Tomita, Munetoshi; Kitagawa, Akio; Honda, Takuya
PATENT ASSIGNEE(S): Nippon Synthetic Chem Ind, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07032522	A2	19950203	JP 1993-199191	19930716

PRIORITY APPLN. INFO.: JP 1993-199191 19930716

AB Recyclable laminates, useful for sheets for cement aging, reinforcing sheets in civil engineering, etc., contain ≥ 1 layers comprising fabrics of oxyalkylene-substituted poly(vinyl alc.) (A). Thus, A, i.e., poly(vinyl alc.) modified by poly(oxyethylene), poly(oxypropylene), etc., prepared by polymerization of **vinyl esters** and oxyalkylene-substituted unsatd. monomers, followed by saponification, was melted at 220°, extruded, wound, drawn at 180°, converted to a nonwoven fabric, then laminated with a liner paper by using a water-soluble hot-melt adhesive containing Na allylsulfonate-modified poly(vinyl alc.), poly(ethylene oxide) sorbitan ether, and mannitol-modified rosin and pressed at 100° for 1 s to give a laminate showing good dimensional stability in solvents and oils.

L15 ANSWER 26 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1995:435977 CAPLUS
 DOCUMENT NUMBER: 123:84311
 TITLE: Saponified poly(**vinyl esters**) and their manufacture
 INVENTOR(S): Nakajima, Takashi
 PATENT ASSIGNEE(S): Unitika Chem Kk, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07010922	A2	19950113	JP 1993-178465	19930628
PRIORITY APPLN. INFO.:			JP 1993-178465	19930628

AB The title polymers, having d.p. ≥ 50 and containing 0.1-30 mol % units $\text{CH}[\text{CH}(\text{OH})\text{CH}_2\text{O}(\text{AO})\text{nR}]\text{CH}_2$ (A = C2-4 alkane-1,2-diyl; n = 1-500; R = H, C1-20 alkyl), are prepared by copolymerizing 0.1-30 mol% $\text{H}_2\text{C}:\text{CHCH}(\text{OH})\text{CH}_2\text{O}(\text{AO})\text{nR}$ (I) and 70-99.9 mol % aliphatic **vinyl esters** and saponifying the copolymers. The saponified polymers form impact-resistant coatings. A mixture of 20 parts I (A = C2H4; n = 5; R = C12 alkyl) and 880 parts vinyl acetate was polymerized at 60° in MeOH in the presence of AIBN and saponified to give a copolymer with degree of saponification 80 mol % and d.p. 1200.

L15 ANSWER 27 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1994:411928 CAPLUS
 DOCUMENT NUMBER: 121:11928
 TITLE: Dispersing agents and aqueous dispersions of ethylene-vinyl alcohol copolymers
 INVENTOR(S): Aoyama, Akemasa; Tsuboi, Toshio; Yamauchi, Junnosuke; Morya, Takeshi; Hirofujii, Satoshi
 PATENT ASSIGNEE(S): Kuraray Co, Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06016747	A2	19940125	JP 1992-196111	19920629
JP 3228482	B2	20011112		
PRIORITY APPLN. INFO.:			JP 1992-196111	19920629

AB Title agents comprise ethylene-**vinyl ester** copolymers with ethylene content 10-70 mol% and saponification degree ≥ 80 mol% and **polyethers** linked together in the form of block or **graft copolymers**. Aqueous dispersions of ethylene-vinyl alc. copolymers

with 15-65 mol% ethylene prepared by using title agents form films with good gas barrier properties. Thus, Uniox PKA 5005 (polyoxyethylene allyl ether) was treated with thioacetic acid in the presence of benzoyl peroxide and then treated with NaOH to give thiol-terminated polyoxyethylene. Polymerization of ethylene and vinyl acetate in the presence

of the thiol-terminated polyoxyethylene as chain-transfer agent followed by saponification gave **polyether**-modified block copolymer consisting of 100 parts ethylene-vinyl alc. copolymer block with d.p. 750, ethylene content 32 mol%, and saponification degree 99.6 mol% and 31 parts polyoxyethylene block linked together via S. A mixture of 10% solution of the block copolymer in H₂O/MeOH 50, ethylene-vinyl alc. copolymer (d.p. 1000) 50, MeOH 200, and H₂O 200 parts was heated at 70° and cooled to 5° to give a dispersion with average particle diameter 0.4 µm, which was stripped of the MeOH at 20° under reduced pressure to give a storage-stable aqueous dispersion with average diameter 0.4 µm and solids 26%. A 20 µm-thick biaxially oriented polypropylene film coated with the aqueous dispersion and dried at 110° showed O permeability 2.5 cm³/m².day.atm, useful for food packaging.

L15 ANSWER 28 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1994:31502 CAPLUS

DOCUMENT NUMBER: 120:31502

TITLE: Aqueous saponified **vinyl ester** copolymer dispersion solutions

INVENTOR(S): Aoyama, Akemasa; Tsuboi, Toshio; Yamauchi, Junnosuke; Morya, Takeshi; Hirofuji, Satoshi

PATENT ASSIGNEE(S): Kuraray Co, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05202151	A2	19930810	JP 1992-101759	19920326
JP 3164322	B2	20010508		

PRIORITY APPLN. INFO.: JP 1991-91235 A1 19910328

AB The title solns., with good storage stability and useful as passivation films with good gas barrier properties, comprise 100 parts ≥95 mol%-saponified ethylene-**vinyl ester** copolymers containing 20-60 mol% ethylene, which are graft- or block-polymerized with 2-30 parts **polyethers**. Thus, Uniox PKA-5003 [poly(oxyethylene) allyl ether] was treated with thioacetic acid and then hydrolyzed to give SH-terminated **polyether**, which was polymerized with ethylene and vinyl acetate and then 99.6 mol%-saponified to give a copolymer, 50 parts of which was dissolved in 600 parts aqueous MeOH at 65° and cooled to room temperature to give a dispersion solution with 0.7 µm average diameter. The dispersion was applied on a biaxially drawn polypropylene film to give a food packaging film with O-permeation 3.3 mL/m²-day-atmospheric

L15 ANSWER 29 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1991:431072 CAPLUS

DOCUMENT NUMBER: 115:31072

TITLE: Pretreating textiles with dispersions of graft polymers based on polyalkylene oxides to impart soil release properties thereto

INVENTOR(S): Holland, Richard J.; York, Alicia V.; Ruppert, Ronald M.

PATENT ASSIGNEE(S): BASF Corp., USA

SOURCE: U.S., 4 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4999869	A	19910319	US 1989-417317	19891005
CA 2026913	AA	19910406	CA 1990-2026913	19901004
CA 2026913	C	19970415		

PRIORITY APPLN. INFO.: US 1989-417317 A 19891005

AB In the title process, fabrics are treated with dispersions of a **graft copolymer** of a polyalkylene oxide having number-average mol. weight 300-100,000 and containing units of ethylene oxide, propylene oxide, and/or butylene oxide, with ≥ 1 **vinyl ester** of C1-6 monocarboxylic acid and/or Me and/Et ester of (meth)acrylic acid. Thus, cotton fabric was treated with a dispersion containing 20% **polyethylene glycol-vinyl acetate graft copolymer** to 10 min at room temperature and dried to give a fabric with good resistance to dirty motor oil.

L15 ANSWER 30 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:535364 CAPLUS

DOCUMENT NUMBER: 111:135364

TITLE: **Vinyl ester**-grafted polyurethanes, their preparation and use

INVENTOR(S): Kroggel, Matthias; Rauterkus, Karl Josef; Seip, Detlev

PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 16 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 308832	A2	19890329	EP 1988-115261	19880917
EP 308832	A3	19900829		
EP 308832	B1	19940615		

R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE

DE 3732089	A1	19890406	DE 1987-3732089	19870924
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ES 2055723	T3	19940901	ES 1988-115261	19880917
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JP 01108208	A2	19890425	JP 1988-235119	19880921
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US 5202394	A	19930413	US 1991-810721	19911218
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PRIORITY APPLN. INFO.: DE 1987-3732089 A 19870924

US 1988-247694 B1 19880922

AB The polymers, with useful properties, are prepared by forming polyurethanes from diisocyanates, diols, and optionally monohydric alcs. and grafting them with C3-20 vinyl carboxylates and/or their saponification products and, optionally, comonomers. A polyurethane (I) with calculated mol. weight 12,284 was prepared from **polyethylene glycol** (mol. weight 1500) and 1,4-butanediol in molar ratio 1:0.48 and hexamethylene diisocyanate. Adding 2.32 parts vinyl acetate (II) over 190 min to 1 part I and 0.2 mol% (based on II) Bz2O2 at 75° and heating 45 min gave a graft polymer with limiting viscosity number (THF, 25°) 38.6 mL/g and II conversion 68.4%. Use of the polymers as adhesives and of the saponified polymers as films is described.

L15 ANSWER 31 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:137544 CAPLUS

DOCUMENT NUMBER: 110:137544

TITLE: Use of graft polymers based on polyesters, polyester-polyurethane, and polyester-polyamides as graying inhibitors in laundry detergents

INVENTOR(S): Kud, Alexander; Trieselt, Wolfgang; Hartmann, Heinrich
 PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 12 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3712069	A1	19881020	DE 1987-3712069	19870409
EP 286019	A1	19881012	EP 1988-105251	19880331
EP 286019	B1	19900627		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
AT 54164	E	19900715	AT 1988-105251	19880331
JP 63265998	A2	19881102	JP 1988-81456	19880404
CA 1307435	A1	19920915	CA 1988-563552	19880407
✓US 4849126	A	19890718	US 1988-179414	19880408
PRIORITY APPLN. INFO.:			DE 1987-3712069	A 19870409
			EP 1988-105251	A 19880331

AB The title polymers, prepared with **vinyl esters** of saturated C1-6 carboxylic acids and/or C1-4 alkyl (meth)acrylates as grafting monomers, are used in laundry detergents to inhibit graying of polyester and cotton-polyester fabrics during laundering. A polyester (mol. weight 1680) prepared from 1200 g **polyethylene glycol** (mol. weight 300) and 528 g di-Me malonate was grafted (1 part) with 1.75 parts vinyl acetate to give a graying inhibitor which was used (0.3%) in a detergent containing C12 alkylbenzenesulfonate 6.25, ethoxylated (11 mol) tallow alc. 4.7, soap 2.8, Na5P3O10 20, Na perborate tetrahydrate 20, Na2SO4 24, Na disilicate 6, Mg silicate 1.25, CM-cellulose Na salt 0.6, and tetra-Na EDTA 0.2%, the balance being water.

L15 ANSWER 32 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1989:77000 CAPLUS
 DOCUMENT NUMBER: 110:77000
 TITLE: Manufacture of heat-resistant hydrophilic polysulfone **graft copolymers**
 INVENTOR(S): Honda, Zenjiro; Tamada, Makoto
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 5
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63030532	A2	19880209	JP 1986-174603	19860724
JP 07116300	B4	19951213		

PRIORITY APPLN. INFO.: JP 1986-174603 19860724

AB The title copolymers, useful for separation membranes, are prepared by grafting copolymers of **vinyl esters** and halomethyl-substituted vinyl monomers with halomethyl-terminated polysulfones, quaternizing halomethyl groups with tertiary amines, and saponifying with alkali. Thus, vinyl acetate-(chloromethyl)styrene copolymer was grafted with NaOC6H4-terminated polysulfone (prepared from Victrex 5003 P) at ≤70°, quaternized with Me3N, saponified with aqueous NaOH, filtered, washed, dried, cast on a PET fabric, and soaked in H2O to give a separation membrane having good resistance to loss of permeability during use.

L15 ANSWER 33 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1988:66007 CAPLUS
 DOCUMENT NUMBER: 108:66007

TITLE: Photosensitive recording materials with elastomeric **graft copolymer** binders and relief printing plates therefrom
 INVENTOR(S): Hoffmann, Gerhard; Koch, Horst; Schulz, Guenther
 PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 7 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3541162	A1	19870527	DE 1985-3541162	19851121
CA 1314751	A1	19930323	CA 1986-521952	19861031
JP 62121447	A2	19870602	JP 1986-262064	19861105
JP 05071942	B4	19931008		
EP 224164	A2	19870603	EP 1986-115918	19861117
EP 224164	A3	19880824		
EP 224164	B1	19900627		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
AT 54210	E	19900715	AT 1986-115918	19861117
DK 8605550	A	19870522	DK 1986-5550	19861120
DK 160907	B	19910429		
DK 160907	C	19911014		
AU 8665535	A1	19870528	AU 1986-65535	19861120
AU 587085	B2	19890803		
US 4849307	A	19890718	US 1987-130216	19871208

PRIORITY APPLN. INFO.:
 DE 1985-3541162 A 19851121
 EP 1986-115918 A 19861117
 US 1986-932330 A2 19861119

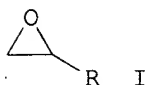
AB Photosensitive recording materials for use in preparing relief plates, especially printing plates for flexog. printing, are composed ≥ 1 (optional) photopolymerizable olefinically unsatd. compound that is compatible with the binder, ≥ 1 photoinitiator, and a binder from an aqueous solution-soluble or dispersible elastomeric graft polymer obtained by polymerization of a **vinyl ester** in the presence of a poly(alkylene oxide) using an initiator for radical polymerization, saponifying or partially saponifying the resulting graft polymer, and, optionally, subsequently esterifying or transesterifying the vinyl alc. units. Thus, poly(ethylene oxide) (average mol. weight 9000) was melted, benzoyl peroxide and vinyl acetate added, and the mixture polymerized. The resultant polymer was then transesterified using a 10% methanolic NaOH solution and the solution then neutralized. This **graft copolymer**, ethylene glycol, tetraethylene glycol diacrylate, benzil di-Me ketal, Duazyn Basic Red TM, N-nitrosocyclohexylhydroxylamine K salt, and 2,6-di-tert-butyl-p-cresol were melt-kneaded and then pressed on a steel support to give a photosensitive layer. Exposure and spray development of the plate gave an elastic relief image with a smooth, nonadhesive surface with shore A hardness 90.

L15 ANSWER 34 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1987:68231 CAPLUS
 DOCUMENT NUMBER: 106:68231
 TITLE: Elastomeric **polyether**-containing impact polymer products
 INVENTOR(S): Wolfe, David L.
 PATENT ASSIGNEE(S): Dow Chemical Co., USA
 SOURCE: U.S., 72 pp.
 CODEN: USXXAM
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4500687	A	19850219	US 1981-275071	19810618
PRIORITY APPLN. INFO.:			US 1981-275071	19810618

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AB The title products, having high impact strength, tensile strength, and tensile modulus and good stress-crack resistance are prepared by dissolving ≥ 1 epoxide monomer I ($R = R_1$ or CH_2OR_2 ; $R_1 = H$, C1-20 aliphatic hydrocarbyl, $ClCH_2$, or $BrCH_2$; $R_2 =$ saturated or ethylenically unsatd. C1-30 acyl group or an optionally substituted inert C1-20 hydrocarbyl group) in a major monomer which is ethylenically unsatd. and **graft copolymerizable** with the monomers I and polymers of the I, polymerizing the I in the presence of an added coordination catalyst, deactivating the catalyst, and polymerizing the major monomer. The major monomer is an alkenylarene, a vinyl halide, a **vinyl ester**, an olefin, etc. Monomers I are allyl glycidyl ether (II), norbornenylmethyl glycidyl ether, glycidyl cinnamate, propylene oxide (III), etc. During the polymerization, high-shear mixing is used to convert the initial continuous **polyether** network phase to particles which form a discontinuous phase in the matrix of the polymer of the major monomer. A resin prepared from II, III, and styrene (major monomer), containing 20% **polyether** derived from a mixture of 5 mol% II and 95% mol% III, had notched Izod impact strength 7.82 ft lb/in., tensile yield 2188 psi, tensile rupture 1366 psi, elongation 14.4%, tensile modulus 2.19×10^5 psi, and Vicat softening temperature 95° .

L15 ANSWER 35 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1984:532671 CAPLUS
 DOCUMENT NUMBER: 101:132671
 TITLE: Finely divided polyvinyl acetals, and their use for stoving coatings
 INVENTOR(S): Hermann, Hans Dieter; Hutten, Ulrich Martin
 PATENT ASSIGNEE(S): Hoechst A.-G., Fed. Rep. Ger.
 SOURCE: Ger. Offen., 21 pp.
 CODEN: GWXXBX
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3246605	A1	19840620	DE 1982-3246605	19821216
EP 113868	A2	19840725	EP 1983-112446	19831210
EP 113868	A3	19850911		
EP 113868	B1	19880316		
R: DE, FR, GB, IT, SE				
JP 59117505	A2	19840706	JP 1983-235228	19831215
JP 05041661	B4	19930624		
US 4499236	A	19850212	US 1983-562218	19831216

PRIORITY APPLN. INFO.: DE 1982-3246605 A 19821216

AB Aqueous dispersions of polyvinyl acetals (particle size $0.5-10 \mu$) contain 0.1-10 phr saponified graft polymers of **vinyl esters** on polyoxyalkylenes which are acetalized simultaneously with the poly(vinyl alc.). Thus, adding 1 g $Cl_2H_25C_6H_4SO_3H$, 0.4 g HCl , and 1.2 g saponified

graft polymer (containing 30% **polyethylene glycol** with mol. weight 10,000, 13% vinyl acetate groups, and 57% vinyl alc. groups) in 144 mL H₂O over 20 min to 400 g 15% aqueous solution of poly(vinyl alc.) (viscosity of 4% aqueous solution 9.1 mPa-s at 20°) and 34 g PrCHO stirred at 15° and stirring 100 min at 16° and 3 h at 45° gave a suspension of polyvinyl butyral with particle size 6-10 μ and free vinyl alc. groups 21.2%. Films (100 μ) of a similar suspension on steel baked at 150° gave white, crack-free, adherent coatings.

L15 ANSWER 36 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1982:20802 CAPLUS
DOCUMENT NUMBER: 96:20802
TITLE: Crosslinked **graft copolymers** by radical-initiated precipitating polymerization
INVENTOR(S): Steffen, Ulrich; Alberts, Heinrich; Morbitzer, Leo
PATENT ASSIGNEE(S): Bayer A.-G. , Fed. Rep. Ger.
SOURCE: Ger. Offen., 16 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3008747	A1	19810924	DE 1980-3008747	19800307
EP 36107	A2	19810923	EP 1981-101292	19810223
EP 36107	A3	19820217		
EP 36107	B1	19860813		
R: DE, FR, GB, IT				
US 4357445	A	19821102	US 1981-238998	19810227
JP 56136810	A2	19811026	JP 1981-29994	19810304
JP 01035848	B4	19890727		
ES 500167	A1	19820101	ES 1981-500167	19810306

PRIORITY APPLN. INFO.: DE 1980-3008747 A 19800307

AB The title polymers are prepared by grafting 10-80% C₂H₄-**vinyl ester** polymer with 20-90% mixture of vinylarom. compds. 15-94, (meth)acrylonitrile 5-50, polyene 1-20, and comonomer 0-15%, with simultaneous precipitation of grafted and ungrafted substrate. Thus, stirring 55:45 C₂H₄-vinyl acetate polymer (I) (Mooney viscosity 20) 3300, styrene 2920, acrylonitrile 1080, Bu acrylate 400, divinylbenzene 80, **polyethylene glycol** (mol. weight 20,000) 100, tert-BuOH 10,200, and H₂O 2000 g with 30% of a solution of tert-Bu perpivalate 20, H₂O 20, and tert-BuOH 200 g at 85°, while adding the remaining initiator solution over 1 h and 5 kg H₂O over 1.5 h and stirring 2 h gives 6500 g graft polymer [80218-78-6] containing 45.5% I, with gel content in THF 72%.

L15 ANSWER 37 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1970:112059 CAPLUS
DOCUMENT NUMBER: 72:112059
TITLE: Vinyl chloride graft polymers
INVENTOR(S): Koyanagi, Shunichi; Maruyama, Akiyoshi; Kitamura, Hajima
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd.
SOURCE: Ger. Offen., 25 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1938911		19700305		

JP 48008477 19730000 JP
US 3812215 19740000 US
PRIORITY APPLN. INFO.: JP 19680731

AB Vinyl chloride **graft copolymers** with exceptional notched-bar impact strength and weather resistance and min. softening point depression were obtained by **graft copolymer** of an C2H4-vinyl chloride (I) monomer and a multifunctional monomer ester. Thus, an C2H4-vinyl acetate copolymer (containing 45 weight % vinyl acetate) 20, H2O 800, poly-(vinyl alc.) (saponification degree 80% and mol. weight 1830) 1. 0, α, α' -azobis(2,4-dimethylvaleronitrile), and ethylene glycol dimethacrylate (II) 4 parts were treated with 400 parts I after the pressure was reduced to 40 mm. The mixture was stirred for 5 hr at room temperature, polymerized at 56° until the pressure dropped to 5 kg/cm² and the softening temperature (ASTM D 1045-51), brittle temperature (ASTM D-746-55T), notch impact strength (ASTM D-256), and fluidity temperature were 75.5°, -3.5°, 21.19 kg-cm/cm², and 168.2°, resp., compared with 65.0°, -31.5°, 15.60 kg-cm/cm², and 158.0°, resp., when II was omitted. A vinyl propionate copolymer was also grafted; graft polymerization of vinyl butyrate and vinyl benzoate copolymers is also claimed.

L15 ANSWER 38 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1969:414248 CAPLUS
DOCUMENT NUMBER: 71:14248
TITLE: **Graft copolymers** bearing at least two unlike types of graft components
INVENTOR(S): Fryd, Michael
PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co.
SOURCE: S. African, 19 pp.
CODEN: SFXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6803043		19681018		
DE 1770473			DE	
FR 1566004			FR	
GB 1210161			GB	
US 3644584		19720000	US	

PRIORITY APPLN. INFO.: US 19670523

AB **Graft copolymers** bearing ≥ 2 unlike types of graft components are prepared by heating a mixture of backbone polymer, 1 type of grafting monomer, an organic liquid, and a free-radical polymerization initiator.

When polymerization is complete, residual monomer is stripped, and the process is

repeated using the 2nd graft component. The backbone may be a diene polymer, such as 1,2- or 1,4-polybutadiene, polyisoprene, or polychloroprene, or a copolymer of these dienes. The backbone may also be a polymer or copolymer of a **vinyl ester**, a **polyether**, poly(vinylpyrrolidinone), a polyurethane, cellulose acetate or cellulose acetate butyrate. The grafting components may comprise unsatd. nitriles or acrylate esters. The **graft copolymers** are useful as coil coatings, packaging films, molding powders, fibers, adhesives, fabric impregnants, and as film-forming components in coating compns. The polymers with polybutadiene (I) backbones and grafts of polyacrylonitrile (II) and Bu methacrylate-methacrylic acid copolymer are especially useful as coating for beverage cans. Because of high thermal stability, polymers having II as 1 of their graft components are useful as wire enamels and in flame-retardant paints.

Thus, a mixture of I 50, acrylonitrile (III) 50, VM and P naphtha 160, and tert-Bu perpivalate (IV) 0.5 part was heated to 85°C.; in 1 hr. the temperature increased to 92°C. without further heating. The temperature was held 15 min. at 92°C., the mixture cooled to room temperature, and unreacted III was stripped at 70°C. under vacuum. To 200 parts of this dispersion was added Bu methacrylate 10, methacrylic acid (V) 1, and IV 0.25 part, the mixture was heated 2 hrs. at 85°C., 0.25 part IV was added, and the mixture was heated and addnl. hr. at 85°C. The dispersion was sprayed on a Sn-free steel panel, air-dried at room temperature, and baked 15 min. at 390°F. to give a tough, flexible film which was impervious to acids and organic solvents, showed excellent adhesion to metal, and resisted burning for several min. in an open Bunsen flame. A 49:1 Me methacrylate-allyl methacrylate copolymer was similarly grafted with Bu acrylate, styrene, and V.

L15 ANSWER 39 OF 45 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1968:459903 CAPLUS
DOCUMENT NUMBER: 69:59903
TITLE: Chewing gum containing vinyl acetate-poly(oxyalkylene) compound
INVENTOR(S): Knapp, Edmund C.
PATENT ASSIGNEE(S): Monsanto Co.
SOURCE: U.S., 4 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3396038	A	19680806	US 1967-657051	19670731
PRIORITY APPLN. INFO.:			US 1967-657051	A 19670731

AB A composition containing a water-insol. **graft copolymer** of vinyl acetate (I) with a poly(oxyalkylene) is mixed with a flavoring agent, a sweetening agent, and optionally, a filler, to provide a chewing gum. Thus, I 97, **polyethylene glycol** (II) (mol. weight .apprx.600) 12, MeEtCO 81, H2O 25, NaHCO3 0.17, and H2O2 0.22 part were refluxed 3 hrs. and the temperature slowly increased to remove vapors. H2O was added to maintain a slurry of soft polymer in H2O. MeEtCO, unreacted I and H2O vapor were driven off as the temperature approached 95°. The precipitated polymer settled through the H2O layer and was drawn off and dried

5 hrs. at 60°. A 1M solution of polymer in C6H6 had viscosity of 1.5 cp. at 20°, the polymer softened at 64° and had 24-hr. moisture pick-up 240%. A I-propylene glycol copolymer with viscosity 1.7 cp. in C6H6 at 20°, m.p. 68° and 24-hr. moisture pick-up 11%, was similarly prepared Copolymers containing 85% I and 15% II of mol.

weight 600-4000 gave 24-hr. moisture pick-up 550-780%. Other suitable copolymers were prepared from I and 3% ethylene oxide-propylene oxide block copolymers, with mol. wts. 1700-8000, and gave 24-hr. moisture pick-up 24-135%. Measurements of the 1-hr. moisture-pick-ups were also given.

=> s vinyl esters grafted polyether?

391625 VINYL
562 VINYL
391785 VINYL
(VINYL OR VINYL)
420768 ESTERS
2 ESTERSES
420769 ESTERS
(ESTERS OR ESTERSES)
46080 GRAFTED